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EDITORIAL

DIABETES COMPLICATING CORTICOID THERAPY

When corticotropin was first available Conn¹ found that all of 3 healthy subjects became temporarily diabetic after receiving doses of 75-100 units for 10-14 days. As a result of this finding corticotropin and cortisone were considered to be potent diabetogenic substances. Subsequent experience has shown that they are not. It is only rarely that non-diabetic patients become diabetic when treated with corticotropin or cortisone in the usual dosage range.²⁻⁴ This 'steroid diabetes' is apparently only temporary and disappears when corticotropin or cortisone is withdrawn. Similarly, in experimental animals, corticotropin is not a potent diabetogen.

Rats can be made diabetic only if forcibly fed in addition⁵ and only for as long as the hormone administration is continued. The carbohydrate tolerance of dogs is not affected by large doses of cortisone, even if the animals are first partially depancreatized.⁶ Guinea-pigs are probably the most sensitive animals.⁷ Sprague⁸ indicates the variability of the response to corticoids in man by citing 3 cases. In the 1st, no impairment of glucose tolerance was found on repeated examination after more than 100 mg. of cortisone had been given for over 200 days. In the 2nd, the 2-hour level was high in a tolerance test performed after 7 days, but was normal 18 days after cortisone had been stopped. In the 3rd, glycosuria and a high fasting blood-sugar level appeared after 6 days on corticotropin; yet these abnormalities disappeared even while the hormone therapy was being continued.

W. P. U. Jackson reports that among patients whose cases were studied at the Massachusetts General Hospital only very few became diabetic on corticoid therapy, and in most of these the disorder was minor or temporary only. Three were initially known to be prediabetic or very mildly diabetic. One of these developed frank diabetes after 10 days of corticotropin; one developed the same under treatment with cortisone, but later

VAN DIE REDAKSIE

SUIKERSIEKTE-KOMPLIKASIES BY BEHANDELING MET KORTIKOÏEDE

Toe kortikotropien vir die eerste maal beskikbaar gestel is, het Conn¹ bevind dat 3 gesonde persone, na 'n dosis van 75-100 eenhede toegedien oor 10-14 dae, almal tydelik suikersiekte ontwikkel het. Op grond hiervan is dit toe gemeen dat kortikotropien en kortisoon kragtige diabetogeniese stowwe is. Latere ondervinding het egter bewys dat dit nie die geval is nie. Dit gebeur selde dat nie-diabetiese pasiënte suikersiekte ontwikkel as gevolg van behandeling met gebruikelike dosisse kortikotropien of kortisoon.²⁻⁴ Hierdie 'steroïede suikersiekte' blyk slegs tydelik te wees en dit verdwyn wanneer kortikotropien en kortisoon onthou word. Ook in die geval van proefdiere veroorsaak kortikotropien nie suikersiekte nie.

By rotte kan suikersiekte veroorsaak word slegs gepaard met gedwonge voeding⁵ en vir net so lank as die hormoon toegedien word. Kortisoon in groot dosisse beïnvloed nie 'n hond se koolhidraatduldning nie, selfs al word die milt eers gedeeltelik verwyder.⁶ Marmotjies is miskien die mees sensitiewe diere.⁷ Sprague⁸ se aanhaling van drie gevalle toon die verskillende reaksies van die mens op kortikoïede aan. Aan die eerste is meer as 100 mg. kortisoon oor 'n tydperk van meer as 200 dae toegedien, maar herhaalde ondersoek na die behandeling het geen belemmering in die glukoseduldning getoon nie. By die tweede het 'n duldningstoets na 7 dae 'n aansienlike 2-uurhoogte getoon, maar 18 dae nadat kortisoon onttrek was, was dit normaal. Glikosurie en 'n aansienlike vastende bloedsuikerhoogte het by die derde na 6 dae onder kortikotropien verskyn. Hierdie abnormaliteite het egter verdwyn selfs terwyl die kortisoonterapie nog voortgeduur het.

W. P. U. Jackson rapporteer dat slegs 'n klein persentasie van die pasiënte wie se gevalle by die *Massachusetts General Hospital* bestudeer is, suikersiekte as gevolg van kortikoïedterapie ontwikkel het. By die meeste van hierdie gevalle was die aandoening slegs van 'n ligte of verbygaande aard. Dit was van die begin af bekend dat 3 van hierdie gevalle of vatbaar was vir suikersiekte of alreeds die siekte in 'n baie ligte graad gehad het. Na 10 dae van behandeling met kortikotropien het die eerste definitiewe suikersiekte ontwikkel; dit het ook met die tweede wat onder kortisoonbehandeling was, gebeur. Die glikosurie en oormatige

even while therapy was continued the glycosuria and hyperglycaemia disappeared; while the 3rd had no glycosuria after 134 days of high-dosage ACTH therapy. As many as 7 out of 12 patients with skin disorders developed impaired sugar-tolerance; other factors concerned may have been the very large doses of corticotropin used and the positive family-history of diabetes in 4 of the 7 cases. Two patients with Addison's disease became actually diabetic when cortisone was used. It has been claimed that patients with Addison's disease are unduly sensitive to the metabolic effects of cortisone.^{17, 18} However, cortisone-induced diabetes must be a very rare complication of this disease. Such a situation has not arisen at the Peter Bent Brigham Hospital¹⁹ despite the wide experience at that centre. Nevertheless one should watch for the development of diabetes if doses of around 50 mg. a day are used in cases of Addison's disease. Another important danger lies in the use of cortisone or ACTH in established diabetics: in these cases retinopathy may appear for the first time or become intensified. One such patient was seen in Jackson's series. There are insufficient data to be sure whether there is any extra danger in treating a pregnant woman, who would already have a high glucocorticoid production.^{20, 21} From experimental observations, wariness would seem indicated, especially if there is any suggestion of prediabetes in the previous history.

The time during which ACTH or cortisone continued to be administered before diabetes ensued varied widely in this series, from 4 days in a case of Addison's disease to 2 years in one of pemphigus. In 3 other cases the period was 11 months, 8 months and 2 months. Thus one can never be sure that hyperglycaemic complications may not develop at any time during corticoid therapy. A similar phenomenon is the diabetogenic effect of pregnancy, which may be manifested only after repeated pregnancies.

TYPE OF DIABETES PRODUCED BY CORTICOID HORMONES

It is generally agreed that corticoid-induced diabetes differs from ordinary diabetes in 3 principal features:^{1, 4, 9} (1) in being reversible, (2) in being insulin-resistant, and (3) in the rarity or mildness of ketosis. The observations reported by Jackson are in accord with (1). Furthermore, impairment of carbohydrate tolerance actually lessened or disappeared in 2 cases while cortical hormone was being continued at the same dosage or, in 2 others, at a lower dosage. This rather unexpected finding may be related in part to improvement in the patient's general condition and in the basic disease. Thus it has been claimed that untreated rheumatoid arthritis can of itself produce a lowering of carbohydrate

glisemie het egter verdwyn selfs voor die behandeling gestaak is. By die derde het daar geen glikosurie na 134 dae van ACTH-behandeling, in groot dosisse, voorgekom nie. Uit 'n groep van 12 pasiënte met vel-aandoenings het nie minder as 7 'n belemmerde suikerweerstand ontwikkel nie. Die uitermate groot dosisse kortikotropien, en die feit dat by 4 uit die 7 gevalle daar 'n definitiewe suikersiekte-geschiedenis in die familie was, mag hierdie persentasie beïnvloed het. Twee pasiënte wat aan Addison se siekte gelyk het, het akute suikersiekte ontwikkel met die gebruik van kortisoon. Dit word beweer dat pasiënte met Addison se siekte buitengewoon gevoelig is vir die metaboliese uitwerking van kortisoon.^{17, 18} Suikersiekte wat as gevolg van kortisoonbehandeling ontstaan, is waarskynlik 'n baie seldsame komplikasie by Addison se siekte. Ondanks groot ondervinding het so 'n geval nog nie in die Peter Bent Brigham-hospitaal¹⁹ voorgekom nie. As gevalle van Addison se siekte met dosisse van ongeveer 50 mg. per dag behandel word, moet hul egter dopgehou word vir die ontwikkeling van suikersiekte. Die gebruik van kortisoon of ACTH in bevestigde gevalle van suikersiekte behels nog 'n ander belangrike gevaar: in sulke gevalle mag retinopatie of vir die eerste keer verskyn, of vererger word. Jackson het so 'n geval in sy reeks teëgekom. Daar is nie genoegsame gegewens om vas te stel of hierdie behandeling ekstra gevaar inhou vir 'n swanger vrou wie se glukokortikoïedproduksie alreeds hoog is nie.^{20, 21} Proefondervindelijke waarnemings skyn versigtige behandeling aan te beveel, veral as daar enige prediabetiese geskiedenis bestaan.

Die ontwikkeling van suikersiekte is in hierdie reeks deur grootliks wisselende tydperke van kortisoon- of ACTH-behandeling voorafgegaan. In 'n geval van Addison se siekte was dit 4 dae; by blaarkoors 2 jaar. In 3 ander gevalle het die periode (voor die ontwikkeling van suikersiekte) respektiewelik 11, 8 en 2 maande beslaan. Hierdie gegewens bewys dat daar nie met sekerheid verklaar kan word op watter tydstip gedurende kortikoïedbehandeling hiperglisemiekomplikasies kan intree nie. Die diabetogeniese uitwerking van swangerskap is 'n soortgelyke verskynsel—dit mag eers na herhaalde swangerskappe voorkom.

SOORT SUIKERSIEKTE BEWERKSTELLIG DEUR KORTIKOÏED-HORMONE

Dit word algemeen aangeneem dat die soort suikersiekte wat bewerkstellig word deur kortikoïede in 3 opsigte van die gewone verskil.^{1, 4, 9} Dit is (1) omkeerbaar, (2) teen insulien bestand en (3) ketose is lig of seldsaam. Jackson se waarnemings klop met eersgenoemde hoedanigheid. In 2 gevalle onder kortikohormoonterapie, in dieselfde dosisse, het belemmering van die koolhidraatduiding selfs verminder of verdwyn. Dit het ook gebeur in twee verdere gevalle waar daar 'n laer dosis toegedien was. Hierdie ietwat onverwagte bevinding mag gedeeltelik te danke gewees het aan die verbetering in beide die algemene toestand en die grondliggende siekte. Dit was derhalwe beweer dat onbehandelde rumatiese gewrigsontsteking op sigself 'n vermindering in die koolhidraatduiding kan mee-

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tolerance,^{10, 11} and cortical hormones may counteract this by their action on the primary disease.

Insulin-resistance (or insulin-insensitivity) was not noted in this series, inasmuch as large doses of insulin were not required for control. Even in cases of established diabetes there was need for little more than the dosage used before the treatment with corticoids. Nor was any case of iatrogenic-corticoid diabetes severe (except in the special instances of diabetes occurring in Addison's disease).

The characteristic impairment of glucose metabolism produced by corticoid hormones is shown in the tolerance curve by a high or even rising level of the blood sugar 2 and 3 hours after the glucose has been given, with a normal fasting blood-sugar. It is interesting that this is also the characteristic type of alteration of sugar tolerance found in Cushing's disease.¹²

SIGNIFICANCE OF FAMILY HISTORY IN THE ETIOLOGY OF DIABETES

The high incidence of diabetic relatives in the families or the affected patients in Jackson's series (6 out of 10) must be considered in conjunction with similar reports by Sprague⁸ (who found this in 2 out of 4) and Bookman¹ (who found 4 out of 5, while the 5th had had previous glycosuria). This incidence of a positive family-history for diabetes in 63% of the combined series is far above the percentage of the non-diabetic population with one or more relatives affected, given by various authorities as 1-10% (Joslin¹³). One is drawn to the theory that corticoid therapy brings out a diabetic syndrome only in persons who are already predisposed. In other words, the normal functional reserve of the anti-diabetic mechanisms—mainly the pancreatic beta cells—is sufficient to deal with ordinary corticoid dosage, but in some persons there is an inherent partial defect of carbohydrate metabolism, which is rendered evident by the stress of corticoid administration.

When one further considers the prediabetic obstetric syndrome, consisting mainly in the production of large babies and stillbirths many years before the development of overt diabetes,^{11, 15} one is led more and more to agree with Colwell¹⁶ that 'the course of diabetes begins at birth' and is made manifest by the various stresses to carbohydrate metabolism which occur during the life span.

The beta cells of the pancreas, with insulin as their weapon, are fighting a lone battle for hypoglycaemia against an array of diabetogenic forces derived from the alpha cells, the pituitary, the thyroid, the adrenal cortex, and the medulla. Whether the addition of exogenous corticotropin or cortisone leads to hyperglycaemia depends on whether the extra antagonist is sufficient to overpower the pancreatic beta-cell reserve.

bring.^{10, 11} Die uitwerking van kortikohormone op die primêre siekte mag hierdie vermindering teenwerk.

Omdat groot dosisse insulien nie vir kontrole nodig was nie, het hierdie reeks nie 'n weerstand teen (of ongevoeligheid vir) insulien getoon nie. Selfs in gevalle van bevestigde suikersiekte was nie veel meer as die dosis wat wel gebruik was, nodig vóór behandeling met kortikoïede nie. Behalwe die uitsonderlike gevalle van Addison se siekte vergesel van suikersiekte, was daar nie 'n enkele geval van iatrogeniese kortikoïed-suikersiekte wat werklik ernstig was nie.

Die kenmerkende belemmering van glukose-metabolisme veroorsaak deur kortikoïedhormone word op die duldingskurwe aangetoon deur 'n hoë of selfs stygende bloedsuikerhoogte 2 en 3 uur na die toediening van die glukose, met normale vastende bloedsuiker. Dit is interessant dat hierdie kenmerkende soort wisseling van suikerweerstand ook in Cushing se siekte voorkom.¹²

DIE BETEKENIS VAN FAMILIEGESKIEDENIS IN DIE OORSAAKLEER VAN SUIKERSIEKTE

Die hoë voorkomssyfer van suikersiekte in die families van geaffekteerde pasiënte in Jackson se reeks (6 uit 10) moet tesame met soortgelyke verslae deur Sprague⁸ en Bookman¹ oorweeg word. Sprague het dit by 2 uit 4 gevind, en Bookman by 4 uit 5—die vyfde het vantevore glikosurie gehad. Verskillende gesaghebbendes gee die persentasie van die nie-diabetiese bevolking (met 1 of meer diabetiese familieleden) as 1-10 aan (Joslin¹³), en dus is die voorkoms van diabetiese-positiewe familiegeskiedenis in 63 persent in die gekombineerde reeks hierbo ver bo die gemiddelde. Die teorie dat kortikoïedterapie 'n simptomegroep van suikersiekte slegs by persone wat reeds daartoe neig bewerkstellig, lyk aanneemlik. Die funksionele reserve van anti-diabetiese meganismes—hoofsaaklik die beta-selle van die milt—kan m.a.w. 'n gewone dosis kortikoïede behartig. By sommige persone is daar egter 'n aangebore gedeeltelike defek in die koolhidraatmetabolisme wat na vore kom onder kortikoïedbehandeling.

Prediabetiese kraamsimptome, soos groot of doodgebore babas baie jare voordat suikersiekte openlik voorkom,^{11, 15} maak Colwell¹⁶ se stelling dat 'die verloop van suikersiekte reeds by geboorte begin' steeds meer aanneemlik. Dit openbaar sigself as gevolg van die verskeie inspannings geveer deur koolhidraatmetabolisme gedurende die lewensloop.

Met insulien as wapen veg slegs die beta-selle van die milt teen die diabetogeniese invloed van die alfa-selle, die hipofise, die skildklier, die biniërskers en die murg om die suikerinhoud van die bloed normaal te hou. Die ontwikkeling van 'n oormatige hoeveelheid suiker in die bloed mag as gevolg van bykomstige, uitwendige kortikotropien of kortisoon voorkom, maar dit kan slegs gebeur as die bykomstige 'vyand' sterk genoeg is om die milt se beta-sel reserwe te oorweldig.

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POLIOMYELITIS VACCINE

The Salk vaccine, which was the subject of the 1954 Field Trial in the United States, contains the product of the action of formaldehyde solution on virulent strains of poliomyelitis virus. More than 400,000 school children were inoculated with this vaccine, and when the Summary Report of the Evaluation of the Field Trial¹ disclosed no untoward results in these children it was generally accepted that the vaccine might be used with safety, though some virologists in Britain and elsewhere were not entirely convinced. This confidence was soon shaken by some subsequent events.

The authorities did not delay in making the Salk vaccine available for the vaccination of children throughout the United States, and the number of children inoculated soon ran up to 5 million. Amongst these, 100 developed poliomyelitis shortly after inoculation, and it seemed likely that in 60-80 of them the disease was the result of the inoculation.² The manufacture of the vaccine has been entrusted to several laboratories, and the distribution of the cases suggested that it was the vaccine from a particular laboratory, and perhaps one other, that was at fault. The only conclusion that can reasonably be drawn is that the vaccine contained residual live virus, whether owing to faulty technique or an inherent defect in the method of preparation.

Great interest has been displayed all over the world in the Field Trial and the subsequent large-scale use of the vaccine in the United States; and trials of vaccine prepared according to the Salk formula were projected in the United Kingdom. However, last month the Ministry of Health decided to postpone these trials and in the meantime work is to be begun to ascertain the

distribution of polio immunity in the population of London. This was announced on 15 July by Dr. G. S. Wilson, Director of the Public Health Laboratory Service, who also stated that the Medical Research Council had started experiments to find a safer vaccine. For this purpose a special unit is being set up in Fajara, in Gambia, British West Africa. Dr. Wilson said there were many things about the Salk vaccine which his service did not like. He spoke of the difficulties of being quite sure that virulence was destroyed by the formaldehyde used, and referred to the narrow margin of safety between ineffectiveness and danger. He said it was difficult to avoid the conclusion that formaldehyde as used in this vaccine could not be relied on completely to kill the virus; the human child was a more effective test than any they had in the laboratory. These were the reasons why they wondered whether it would ever be possible to make a vaccine of the Salk type quite safe.²

Dr. Wilson went on to say that opinion not only in England but, he believed, in the United States, was that a vaccine prepared from living attenuated virus was more likely to fulfil their requirements than a dead virus. The most successful vaccines that had been developed in the past had been of the attenuated living type. There were strains of that nature available, but he did not think the search for polio vaccines was likely to be a short one.²

In South Africa, where there have been distressing outbreaks of poliomyelitis, much research on the subject has been carried out, and at the Johannesburg laboratories of the Poliomyelitis Research Foundation large stocks of a vaccine of the formalin-killed type have been

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prepared and are available. A decision whether this vaccine should be brought into use for the protection of the child population has been awaited for some months, and a committee of experts, comprising virologists and other pathologists and public-health medical officers, appointed to advise on polio prophylaxis, has had the matter under consideration. In view of the incidents in America it may be taken that the vaccine will not be passed for use in South Africa until its safety is assured. The Secretary for Health (Dr. du Pré le Roux) announced last week: 'There will be no inoculation of children in South Africa with anti-polio vaccine of the Salk type until the whole position has received further study'.³

A further meeting of the advisory committee has been called and may have been held by the time this issue of the *Journal* is published.

Speaking on 22 July,⁴ Dr. James Gear, Director of Research of the Poliomyelitis Research Foundation, referred to the highly virulent Mahoney strain of polio virus which was incorporated in the Salk vaccine and said that this strain had not been used in the vaccine

made at the laboratories of the Foundation. He said that scientists in the United States, England, Denmark and Sweden were of opinion that a safe vaccine could be produced by the use of non-virulent or mild strains, which if not entirely killed in the processing would have no ill effects when injected under the skin. Safety tests had been made more stringent, and safer vaccine would be available in the coming year. Dr. Gear remarked that in Denmark 500,000 children had been vaccinated against poliomyelitis without untoward results, and in Canada 800,000, and that neither country had been diverted from its immunization programme by the incidents in America.

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REVISION SERIES

XIV. THE PRESENT-DAY TREATMENT OF THE VENEREAL DISEASES

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It is common knowledge and almost universal experience that, since the introduction of the antibiotics, particularly penicillin, there has been a marked decline in the prevalence of the venereal diseases. In 1947 there were 5,318 new cases registered at the municipal clinics in Cape Town; in 1952 the figure was 3,317. None of these drugs suppress sexual activity, but by cutting short the period of infectivity they tend to lessen the incidence rate of venereal disease and prevent the occurrence of those complications for which special procedures and skill were necessary. Moreover, the extensive use of penicillin throughout the world in numerous and varied clinical conditions is no doubt suppressing much incubating venereal disease or curing latent cases.

Though specialization in this field will probably cease with the present generation, the experience and knowledge of the present-day venereologist should not be too lightly discarded.

The invitation to write this article contained the suggestions that the views put forward should be based on personal experience, should be lucid in presentation and, if need be, dogmatic in expression. An attempt will be made to confirm to these desiderata. None the less, the statements advanced here fairly represent the opinions of fellow-specialists in this field. Minor personal preferences of course exist, but the guiding principles conform to the accepted standards of the

World Health Organization and to those of specialist workers.

A short summary of the symptomatology of the venereal diseases is given with suggestions about the proper procedure to adopt in each case. While it is easy to give counsels of perfection and difficult to carry them out, they should always remain as a standard to maintain wherever possible, and to modify only to the demands of circumstances which cannot be overcome.

Wherever a postal service exists specimens can be submitted for examination—as they should, since the venereal diseases are the subject of special legislation imposing obligations on the patient as well as on his medical attendant.

CLINICAL FEATURES

The signs and symptoms of the venereal diseases are usually associated with the following:

- (a) urethral discharge in the male; urethral and vaginal discharge in the female.
- (b) Lesions ('sores') on the external genitalia.
- (c) Skin eruptions.
- (d) Various signs such as enlarged glands, tumours, disease of the cardiovascular and central nervous systems, bone lesions, etc.

These various syndromes will be considered briefly

so that the practitioner will have some guide to the proper procedure to adopt.

(a) *The presenting lesion is a urethral discharge with an additional vaginal discharge in the female.*

The male urethra is a popular throughfare for various micro-organisms, and it is a great error to assume that the gonococcus is always the intruder. As a matter of fact, non-gonococcal urethritis is almost as common nowadays as the gonococcal type. Such infections may be due to organisms other than the gonococcus, e.g. *B. coli*, *Pseudomonas*, *Proteus vulgaris*, etc., some of which are insensitive to penicillin. The practitioner must not be surprised therefore at his failure to cure such cases if he does not take the trouble to satisfy himself that the urethritis in question is not due to the gonococcus. Trichomonads cause a urethritis in the male, usually the spouse or sex partner of a female with an undetected or uncured trichomonas vaginitis. Abacterial urethritis may be due to some viral condition, or to a stricture, or to local traumatic or pathological conditions, or to disease of the upper urinary tract. No attempt is made here to give a list of all the possible causes of urethritis; but enough has been said to warn against the bad habit of giving penicillin blindly, and of diagnosing gonorrhoea without justification, at the risk causing much unnecessary unhappiness and domestic strife.

Procedure. In urethritis a smear should always be taken. For this purpose the urethra should be milked forwards, by patient or examiner, starting from the perineum.

In the female, on the gloved finger being placed in the vagina and the urethral orifice pressed gently upwards and backwards, any pus present will show itself at once. A speculum should be passed, and if an abundant frothy discharge is seen at the fundus and, after swabbing, the cervical orifice looks free from any discharge, trichomoniasis can be suspected. In the search for the gonococcus material must be taken from the cervical canal, and if the examiner is not going to stain and examine the smears himself, he can mount both the urethral and cervical specimens at either end of a slide distinguished by the letters C and U. Slides so made are dispatched to the laboratory or—if the practitioner does his own microscopic work—are stained by Gram's method and the diagnosis 'gonorrhoea' only made when large groups of gram-negative, bean-shaped diplococci are seen—preferably within a leucocyte. He need not wait for the diagnosis to be reported from the laboratory before commencing treatment (detailed in a latter portion of this article), but the label of a venereal disease must not be attached to a person without cause. If it is impossible to have a smear examined, the patient and sex contacts should receive appropriate treatment without the diagnosis 'gonorrhoea' being mentioned.

In the 'typical' case, i.e. where an abundant thick, creamy discharge appears within a week of an isolated sex exposure, the clinical diagnosis of gonorrhoea is likely to be correct; but even under these conditions it should not be recorded as a venereal disease without proof—especially in married persons. In South Africa

proof usually implies diagnosis by smear alone; in other countries culture is insisted upon. Whenever possible and practicable the practitioner should avail himself of skilled laboratory facilities to detect the offending organism and its susceptibility to the various antibiotics.

(b) *The presenting lesion is a 'sore' on the genitalia.*

This may be a sore, papule or other sign; whatever it is the patient must be examined thoroughly, the whole skin and mucous membranes inspected, the glands palpated and—in the adult female—a speculum passed.

Syphilis should always be suspected and no penicillin ever given until the decision is reached to treat the patient for this disease. This decision should never be lightly made; the only unequivocal proof is finding the *Treponema pallidum* in the suspected lesion, and this investigation should be carried out wherever possible. Clinical appraisal is a good second best when examination discloses an oval, or round, indurated sore accompanied by local adenopathy. Chancroid, herpes, epithelioma, lichen planus are some of the many conditions which may be located on the external genitalia. The Wassermann test does not always help, for it may be negative in early syphilis, or positive owing to an underlying condition not associated with the lesion under consideration.

Procedure. This will vary with the type of case; as for example between the promiscuous unmarried male and the married person for whom the diagnosis of syphilis is of great domestic and social import. Ideally, dark-ground examination should be done on every case that at all resembles syphilis. A specimen of blood must be taken for a Wassermann and other tests and the patient examined thoroughly so as to exclude other conditions, e.g. scabies, lichen planus, etc. Secondary syphilitic lesions must not be forgotten here, nor herpes, which seems to be on the increase, nor, in the isolated lesion, carcinoma.

During the waiting period, while investigations are being carried out, saline lotions may be used locally and sulphonamides given by mouth; but *no penicillin or other antibiotics, some of which have treponicidal properties, should be given.* Sudden improvement and/or retrogression during sulphonamide therapy points to a chancroidal infection. If it is decided to treat the case as syphilis, then contacts should be sought and the patient warned of his obligations under the Public Health Act. But beware of diagnosing syphilis without taking into account the implications of such a verdict!

(c) *The presenting lesion is an eruption on the body.*

Practitioners should remember that a *vesicular or bullous eruption in an adult for all practical purposes, is never syphilis.* Intense itching, too, is against syphilis. Naturally, the patient must be carefully examined all over, the mucosae inspected and the glands palpated. Enquiries should be made about the taking of drugs and the sexual history should be ascertained. Severe constitutional signs and symptoms are not a feature of syphilis. On the other hand, the Wassermann reaction has a high diagnostic value: a positive reaction

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makes the diagnosis of a generalized eruption as syphilitic at least a probability; a negative practically excludes it.

Procedure. Take a specimen of blood for a Wassermann and other serological tests for syphilis. Specimens may be sent through the post provided the precautions and suggestions of the laboratory are observed. If special circumstances warrant, a second opinion is desirable, since the diagnosis of secondary syphilis can be of great significance to the patient. The doctor who takes the responsibility of treating such cases before laboratory or expert confirmation is obtained, may find his clinical judgment supported by the immediate and dramatic improvement to penicillin. On the other hand, he may to his chagrin observe no improvement, and he has now introduced an element of confusion into a problem where clarity, if not certainty, should prevail.

- (d) *The presenting lesion is a chronic ulcer, discharging inguinal glands, tumour, or some symptom showing involvement of the cardiovascular or central nervous system.*

Two of the recognized venereal diseases—lymphogranuloma inguinale (lymphopathia venereum, poradenitis) and granuloma venereum—are relatively rare in South Africa, the latter more so than the former. Even chancroidal infection is not common, and the late skin, bone, cardiovascular and nervous manifestations of syphilis are certainly much rarer today than they were, say, 10 or 15 years ago. Still, they do crop up from time to time. Enlarged, broken-down glands with multiple sinuses, in the groin chiefly, may be a fairly early manifestation of lymphogranuloma inguinale. This is a disease of great chronicity presenting in its later stages many puzzling clinical pictures such as rectal stricture and elephantiasis of the genitalia accompanied by ulceration. There is some evidence that the causal virus may go further afield and produce pathological changes in organs remote from the portal of entry.

Large, foul ulcerations of long standing on the genitalia, in the folds of the groin or stretching backwards into the perineum suggest the possibility of granuloma venereum. The disease is due to a small gram-negative oval body, the so-called Donovan body, which is found by appropriate staining in the cytoplasm of large mononuclear cells. Very few cases have been reported in South Africa—possibly because they have not been recognized.

Any chronic ulceration or skin lesion may be due to syphilis. At times even the experts are confused. In a case recently seen there was a very extensive, untreated tertiary syphilide of 11 years standing! Such lesions, however, are rare in Europeans, who are usually prompt in seeking medical advice.

Procedure. The Frei intradermal test for lymphogranuloma will suggest itself in cases of discharging inguinal glands, elephantiasis or pachydermatous conditions of the genitalia and anal margins. Note that the large cauliflower mass of warts frequently seen in these sites are in quite a different category. The test, though undoubtedly useful, has the disadvantage of all such

intradermal tests, viz. doubtful reactions and the persistence of positive reactions long after the disease has ceased.

Finding the so-called Donovan bodies in large monocytes is diagnostic of granuloma venereum (granuloma inguinale). The technique advised is to excise a piece of the suspected lesion and to smear a microscopic slide with the freshly-cut under-surface of the tissue wedge. Special stains, such as Leishman's, Giemsa's or Wright's, have to be used, and the practitioner is hardly likely to undertake the task. Specimens can, however, always be sent through the post to a laboratory.

With chronic skin lesions and unexplained subcutaneous or visceral tumours, the Wassermann test is of limited assistance, because conflicting serological findings are unfortunately all too common. A positive reaction may be only coincidental. Nevertheless immediate treatment with penicillin is justifiable, particularly in the face of some threatened catastrophe such as perforation of the palate. Its dramatic healing effect on bizarre skin conditions or visceral tumours suggests syphilis as a likely cause, but the wise practitioner will always carry out a series of Wassermann tests and will never neglect to send a specimen for histological examination where a malignant growth is possibly at fault.

In cases of cardiovascular and nervous-system disease it is advisable to have expert opinion. The attendant doctor is reminded of the absolute importance, in suspected cases of nervous syphilis, of an examination of the cerebrospinal fluid, which will distinguish between the progressive, active case and the patient who has characteristic, but merely residual, signs of a burnt-out process. Similarly, a leaking aortic valve may persist though the disease which caused it may be cured. It is precisely in such cases that the specialist should be called to give expert guidance.

TREATMENT

The treatment of the venereal diseases—assuming that either a definite diagnosis has been made or that the circumstances warrant no delay in instituting treatment—can be carried out in accordance with the schedules outlined in the following text.

A. *Gonorrhoea.*

Penicillin by injection is the drug of choice. A dosage of 300,000 units will cure over 90% of cases, provided the therapeutic level in the blood is maintained for 8-12 hours; this means employing one of the long-acting preparations. Certainly 600,000 units will cure all uncomplicated gonorrhoea in both sexes. So far no strain of naturally-occurring gonococci has been found resistant to penicillin. This, however, is not true of streptomycin; strains resistant to that drug have been reported.

Penicillin is suitably given as PAM, the oily suspension of the procaine salt with aluminium monostearate. Streptomycin (or di-hydrostreptomycin) can be given in 1 g. doses by intramuscular injection, alone or in combination with penicillin. For simple, un-

complicated gonorrhoea, then, either of the following suffice:

- (i) PAM: 300,000-600,000 units by single intramuscular injection.
- (ii) Streptomycin: 1 g. by intramuscular injection.
- (iii) Penicillin and streptomycin: usually 400,000 units of the former and 0.5-1 g. of the latter, as one combined injection.

If there are any lesions suggestive of syphilis present it is advisable *not* to give penicillin until this disease is diagnosed or excluded. In such cases streptomycin plus sulphonamides by mouth, and saline locally on the suspected syphilitic lesion, is sound interim therapy. On the other hand, if the two diseases, gonorrhoea and syphilis, are present, or the practitioner is satisfied that they are, then a curative dose of penicillin for the latter automatically cures the former.

Gonorrhoea with complications such as epididymitis, arthritis (rare nowadays), iritis etc. requires large doses of penicillin, e.g. 2.5 million units, perhaps more, given in daily doses of 300,000-600,000 units in the form of some slowly-acting preparation. Vulvovaginitis in children due to gonorrhoea responds well to the doses used in adult cases.

The danger of masking an underlying syphilis with such doses as 300,000-600,000 units of penicillin has been exaggerated; but, in any case, it is sound, commendable practice in treating acute gonorrhoea to give such a large dose of a long-acting penicillin—1.2 M. PAM—that any syphilitic infection acquired at the same time may thereby be eliminated. A specimen of blood for the Wassermann test should always be taken at the first visit.

Tests for cure are not necessary in the early, uncomplicated case, but the patient should be kept under observation for at least 3 months, with a further Wassermann test at the end of that time. Patients treated for complications of gonorrhoea should have repeated tests for the presence of the gonococcus in the natural secretions, urine, prostatic fluid, etc. The culture test, so widely used overseas, is not exploited enough in South Africa.

Persistence of discharge does not mean failure to cure, since organisms unresponsive either to penicillin or streptomycin may be the cause. Such cases will have to be treated either with sulphonamides or with the more expensive tetra-cycline preparations.

B. Chancroid or Soft Sore.

This disease is usually diagnosed by exclusion. The sulphonamides are very useful; 1 g. 4 times daily for 5-7 days usually suffice. This course may be repeated. Failure to show signs of healing suggests some other condition, e.g. syphilis, malignancy, etc., when appropriate steps must be taken to confirm or exclude these suspicions. Suppurating buboes, if present, will have to be opened in most cases.

Herpes of the genitalia can cause confusion. This condition is not rare. First there is itching and burning, and then a few small vesicles appear, which break down and coalesce. Bland local treatment is usually all that is required. Recurrences are common. Follow-up in

these instances should be for at least 3 months, with serological tests to exclude syphilis.

C. Lymphogranuloma inguinale.

The sulphonamides are also useful in this disease. (The prefix 'lympho-' distinguishes this virus disease from the granuloma caused by the 'Donovan bodies'). Doses of 1 g. 4 times daily for 10-15 days, continuously or in successive courses with short intervals, is given in early cases. Members of the tetracycline group, e.g. Aureomycin, Chloromycetin, Terramycin, give satisfactory results in doses of 0.5 g. orally 4 times daily for 5-10 days, or longer if healing is delayed.

Serological tests for syphilis should be made at intervals for at least 3 months after cure. Surgical or other intervention will suggest itself in certain cases.

Granuloma Venereum

This rare disease, diagnosed with certainty only by finding the causative organism, the so-called 'Donovan bodies', was formerly very refractory to treatment. Today, fortunately, it responds well to the antibiotics with the exception of penicillin, so that the mutilating effects of this chronic ulcerative malady are prevented.

Streptomycin (or the di-hydro salt) is effective, given in daily 1-2 g. doses by intramuscular injection for 7-10 days, or longer, according to the response obtained. Aureomycin, Terramycin, Chloromycetin have all been used successfully in doses of 0.5 g. 4 times daily. The duration of this therapy will vary with the case. Resistance or relapse require prolongation of treatment, or a changeover to another drug.

TREATMENT OF SYPHILIS

Penicillin is the drug of choice in all types of syphilis. Nothing is gained by using arsenic or bismuth, though in some countries both are still given in addition to penicillin. Some of the other antibiotics have treponemicidal properties in the following order of merit: Carbomycin, Erthromycin, Aureomycin, Terramycin, Chloromycetin—the last 3 being almost bracketed together. As sensitivity to penicillin is on the increase, we may be faced any day with the necessity of either combating the hypersensitivity or using an alternative drug.

PAM is the penicillin preparation most widely used. It is convenient, efficacious and relatively cheap. There is, however, evidence from the analysis of large numbers of cases that di-benzylethylene-diamine di-penicillin (Bicillin, Wyeth) gives better results.

Penicillin by mouth cannot be recommended, since the most cooperative of patients will find it hard to adhere to the schedule of treatment.

(a) *Primary Syphilis.* At least 2.4 M should be given, but there seems to be no need to exceed 4.8 M. Any of the following schedules is suitable: 2.4 M by single injection of Bicillin, or 1.2 M of PAM, or Bicillin, on days 1 and 8; or 1.2 M of PAM or Bicillin on day 1, and thereafter 0.6 M or 0.9 M of PAM at 3-6 day intervals until the total dosage decided on has been given.

The post-treatment period of observation should

be 2 years, with blood tests at intervals of 3-6 months and an examination of the spinal fluid in the 2nd year. Few patients will submit to this, but the doctor should record this as his advice. In a few cases the Wassermann test may remain positive even after the 9th month. Repeat treatment is called for if it is positive at the 12th month or there is a reappearance of syphilitic lesions, which is not necessarily a relapse.

(b) *Secondary Syphilis*. A dosage of 4.8 M will give a high percentage of cures. Nothing is gained by giving, say, 2-3 times this dose; doubling the dose does not halve the failure rate.

The total dosage can be given by using either PAM or Bicillin (or other repository preparations) in weekly or twice-weekly injections. Since an adequate penicillin level persists for several days after a single injection of these drugs, daily injections are not necessary. A convenient schedule is 1.2 M of PAM weekly for 4 weeks, though a 5-6 day interval would serve. The interval between injections is dependent on the duration of an effective therapeutic level of penicillin in the blood. The post-treatment observation period is the same as in primary syphilis. Serological, spinal fluid and clinical negativity at 2 years, for all practical purposes, indicates cure.

(c) *Late and Latent Syphilis*, excluding syphilis of the central nervous and cardiovascular systems. A total dosage of 4.5-6 M is adequate, using either of the long-acting preparations in weekly doses. Not all cases diagnosed by blood tests alone are, in fact, syphilis; many would prove to be 'false positive' reactors if the *Treponema pallidum* immobilization test were available.

Sero-negativity may take a long time to appear; many cases may remain permanently positive to the Wassermann and other tests, though completely cured.

(d) *Cardiovascular Syphilis*. Large doses of penicillin are recommended—8-10 M. The long-acting preparations already mentioned are ideal for this purpose, given in weekly doses of 1.2 M, though shorter time-intervals are not prohibited.

Investigations prove that histological retrogression of the syphilitic lesions occurs, and that the dangers of a Herxheimer reaction have been much exaggerated. Medical and surgical measures in cardiac failure or in aneurysm have an important role.

(e) *Syphilis of the Central Nervous System*, diagnosed by clinical observation and examination of the cerebrospinal fluid. The long-acting preparations in doses of 10-12 M give excellent results. The ultimate prognosis depends on the amount of irreversible damage to the nervous system. Herxheimer reactions following treatment may be dangerous. Old-standing optic atrophy will not improve, but many paretics have resumed useful and exacting occupations. Prolonged follow-up studies in these and cardiovascular cases are necessary. Specialist advice, and frequent lumbar puncture and X-ray examination of aortic cases are necessary for a proper assessment of healing. Penicillin alone is

efficacious; hyperpyrexia induced by any means, including malaria, seems to give no better results than the drug acting alone.

(f) *Syphilis in Pregnancy*. Complete protection of the foetus is achieved by giving 1.2 M of PAM (or other slow-acting penicillin) once weekly for 4 weeks. It should be given as early in pregnancy as circumstances permit. Failures are seen only in mothers with early syphilis who do not complete the schedule. In such cases treatment of the mother and child should be carried on during the puerperium. Further treatment for syphilis for the mother is not necessary in the majority of cases.

(g) *Congenital Syphilis*. In the new-born infant, 200,000 units per lb. of body weight as a total dose is curative. It can be given in twice-daily injections of 100,000 units of aqueous penicillin or in daily injections of 200,000 units of procaine penicillin (for convenience sake, all infants can be regarded as weighing 10 lb.). This ensures adequate treatment during the lying-in period. In older infants the oily suspension of penicillin, e.g. PAM, can be used—as in late congenital syphilis—the dosage being adjusted to the age of the patient. In practice adult doses can be given after the age of 5 years. Congenital syphilis must not be diagnosed on the result of one positive Wassermann test.

(h) *Prophylaxis* or abortive treatment for syphilis. It has been shown that 1.2 M of a long-acting penicillin, given in a single dose during the incubation period, will protect against syphilis. Not all physicians will agree as to the correctness or advisability of treating a disease whose presence is merely conjectural. The decision to do so or not is a personal problem for each practitioner, though the patient's preference should be sought. Should one 'wait and see' or forestall the event? If treatment is given the patient should be advised to remain under observation for at least 6 months.

Repeat Treatment. In cases where treatment had failed—as shown by progression or a sudden sustained rise in the Wassermann titre—a course of double the dose previously used should be given. Apparent relapse may be a reinfection. The author has seen 3 primary chancres occurring successively in one patient some months after the preceding attack had been cured.

Time and Dosage. The literature abounds with variations of the time and dosage factors, but if the practitioner gives the recommended total in a time period of not less than 10 and not more than 30 days his results will be good. There is nothing magical in the weekly dose; it is largely a matter of convenience. He should not judge his success or failure by the time it takes for the blood test to become 'negative'; this does not happen like the sudden descent of a lift.

In pursuit of clarity individual references have been omitted, but acknowledgment is thankfully made here to all those, who by the publication of their clinical observations and laboratory findings, have built up our knowledge of the present-day successful treatment of the venereal diseases.

HYPERNEPHROMA IN A CHILD OF FIVE YEARS

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This rarity, hitherto regarded as practically unknown, has cropped up here and there in the literature of late years.

The adult type of renal parenchymal carcinoma was regarded by Bell¹ as so rare as to cause doubt if it ever occurred at all. Nearly all renal growths occurring in the 1st decade are embryomas (Wilm's tumours), and growths of any sort occur very seldom in the 2nd and 3rd decades. Bell quotes Hellstrom² as publishing a case, but criticizes the absence of microscopic illustrations. Gross,³ over a period of 30 years, found no hypernephromas in a series which included 96 embryomas. He says, 'The extreme rarity of hypernephroma in childhood makes it rather superfluous to consider the lesion in a differential diagnosis'.

Willis⁴ in 1,060 necropsis for carcinoma found 27 cases of renal carcinoma, none of which were in children. His youngest cases were 29, 30 and 32 years old. The mean age at death was 58 years.

Priestley⁵ in a series of 642 renal tumours found 502 cases of adenocarcinoma. Of these only one patient, aged 23 years, was below the age of 30. The mean age for adenocarcinoma of the parenchyma was found to be 52.8 years, and that for Wilm's tumour 6.5 years.

Riches, Griffiths and Thackray⁶ in a magnificent study of 2,314 cases of renal and ureteric growths, found that 75% of these were cases of adenocarcinoma, of which 80% were in the 5th, 6th or 7th decade. The youngest was 11 years old, and the eldest 86. These authors refer to a case, mentioned by Roche,⁷ of adenocarcinoma in a girl of 6, and add, 'The known variations in the histology of Wilm's tumour make it possible that this was the more correct diagnosis'.

Nicholls,⁸ however, has reported a case of clear-celled papillary adenocarcinoma in a child of 22 months, and Hempstead *et al.*⁹ report 2 more, stating that before their 2 cases only 4 cases had been registered in the American Tumour Registry; these 2 cases were aged 8 and 14 years.

Finally Beattie¹⁰ reports a case in which he performed nephrectomy in April 1951. This patient was 7 years old when first detected, and was alive and well 2 years after the operation. Beattie regards the prognosis as encouraging. In the case to be recorded below the patient was well and apparently free from metastasis 3 years after the operation, but died of metastases 8 months later.

Hempstead and his associates attribute the rarity of these tumours in children to the fact that, as is believed, they arise in adenomata, whose development is slow and related to aging processes.

CASE REPORT

M.T., a Cape Coloured girl just under 6 years old, was admitted to Groote Schuur Hospital, Cape Town, in July 1948. A year

before she had had a painless haematuria of 4 months' duration, and now had a large right renal mass.

Pyelography showed a normal left kidney and a non-functioning right kidney, whose position was occupied by a mass (Fig. 1).



Fig. 1. Pyelogram.

The liver was palpable 2 fingers' breadth below the costal margin. Its edge was firm and smooth. At cystoscopy a normal bladder was seen and the right ureter was catheterized. A retrograde pyelogram (Fig. 2) revealed advanced distortion caused by the growth and extensive invasion of the ureter by polypoid extensions of the tumour, which caused numerous filling defects in the shadow of the upper portion of the ureter.

On 4 August 1948 a right lumbar nephrectomy was performed. The kidney was easily delivered. Growth was felt in the pelvis extending well down the ureter, which was divided well below the extension of the tumour at the lowest possible level. The kidney having been removed, the resultant cavity was explored for glands. No enlarged glands were felt and the liver appeared to be normal.

The appearance of the tumour is shown in Fig. 3, which does not, however, illustrate the length of ureter removed, owing to the shrinkage caused by formalin.

The pathologist, Dr. G. Selzer, reported as follows: 'The cut surface shows a cellular tumour divided into lobules by dense bands of fibrous tissue. The tumour has extended into the pelvis and upper part of the ureter. The histology is that of a papillary carcinoma or so-called hypernephroma (Fig. 4). There are numerous small foci of calcification, and one focus of bone formation was encountered. The appearance is not that of a nephroblastoma'.



Fig. 2. Retrograde pyelogram.



Fig. 3. The tumour after removal.

The patient made an uninterrupted recovery, and after a course of post-operative X-ray therapy returned home in good health. Apart from one or two minor setbacks, in one case due to measles, and in another to a bicycle accident, she remained well and lively for 3 years. It was then found that she was failing to gain weight, and in September 1951 a lump was detected in the left side of the upper abdomen. The left kidney was hydronephrotic and was displaced by the mass. The diagnosis of glandular metastases was made and further irradiation was given. Deterioration in the child's health continued and she died on 12 March 1952, 3 years and 7 months after her operation and over 4½ years after the onset of symptoms. Consent for a post-mortem examination was not obtained.

COMMENT

This case when first seen was diagnosed as a Wilm's tumour. The long survival after operation was so

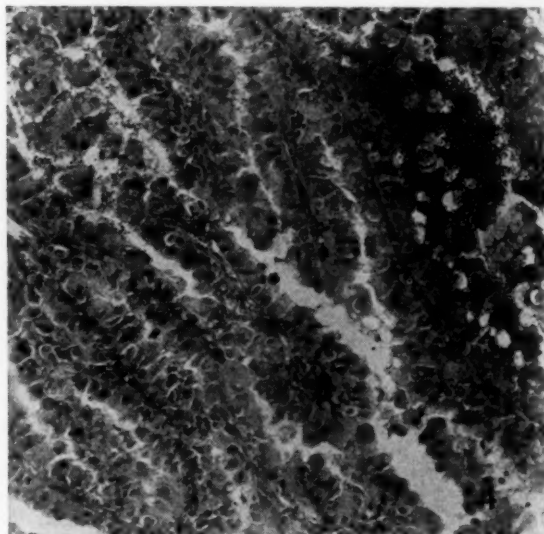


Fig. 4. Photomicrograph of tumour.

encouraging that for some time the patient was a show case, and she was nearly reported as a case of probable long-term survival.

The diagnosis of hypernephroma is based primarily on the histology, which is that of a clear-celled papillary adenocarcinoma. Foci of calcification are not uncommon in hypernephromata and it is probable that metaplasia in one of these was responsible for the one focus of bone formation encountered. The macroscopic appearance of the growth and the subsequent long survival in spite of the very advanced nature of the case are further points which support the diagnosis.

Nearly all authorities are clearly in favour of the abdominal approach for renal tumours in children. In this case it is felt that probably an abdominal nephrectomy would have been better. At the time it was assessed clinically as a tumour which would be particularly easily removed by a lumbar nephrectomy, and this assessment proved correct.

I am indebted to Mr. S. Scher, the Head of the Department of Urology, and to the Medical Superintendent of Groote Schuur

Hospital for permission to publish the case, to Dr. G. Selzer for the pathological report and for much useful advice, and to Mr. McManus for the excellent photographs.

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BACILLARY DYSENTERY IN AFRICAN CHILDREN ON THE WITWATERSRAND

R. G. BOARDMAN, B.A.

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"It has . . . been shown in the United States and elsewhere that when cases of "diarrhoea, enteritis and dysentery" are carefully studied, the majority appear to be bacillary dysentery."¹

The investigation to be described was carried out to ascertain the importance of bacillary dysentery in the causation of diarrhoeal disorders among African children in the Johannesburg area. It was found that dysentery organisms were present in less than 20% of these patients.

Material and Methods

The survey was carried out at the out-patients department of the Baragwanath Hospital on 200 African children suffering from diarrhoea. Half the cases were investigated during winter and the remaining 100 cases during the middle of summer. There was no selection of cases and the age distribution was as shown in Table I.

TABLE I. PATIENTS IN WINTER AND SUMMER SERIES DIVIDED INTO AGE-GROUPS

Age of Patient	Winter	Summer
Birth to 6 months	8	17
Over 6 months to 1 year	34	24
Over 1 year to 2 years	39	50
Over 2 years to 9 years	19	9

A group of 50 children of comparable age with complaints other than diarrhoea served as controls. All control specimens were taken in summer. Only one specimen was examined from each patient and each control subject.

Specimens were obtained for bacteriological examination by means of 'throat' swabs which were introduced as high as possible into the rectum and rubbed over the mucosa. All swabbings were carried out by the same person (E.K.) and specimens reached the laboratory within 1 hour of collection.

On arrival at the laboratory each swab was agitated first in a tube containing 10 ml. normal saline and then in a tube with selenite F broth. One loopful of the saline suspension was plated immediately on SS agar

with saccharose (Difco) and desoxycholate-citrate agar (Difco). The selenite broth culture was incubated overnight before being plated on the same media. Culture plates were inspected after 18 hours' incubation and colonies were picked off for final identification by fermentation and agglutination tests.

Results

The results of the culture of the rectal swabbings are shown in Table II. Dysentery bacilli (*Shigella flexneri* or *Shigella sonnei*) were found in 6 cases in the winter series and in 14 cases in the summer series. *Shigella flexneri* was identified in 5 out of 6 cases in winter and 7 out of 14 cases in summer. Organisms of the *Salmonella* group were present in 3 of the dysentery cases and in 9 other patients in the summer series. Neither *Shigella* nor *Salmonella* organisms were isolated from members

TABLE II. GROWTH OBTAINED ON SELECTIVE MEDIA FROM RECTAL SWABS ON 200 AFRICAN CHILDREN SUFFERING FROM DIARRHOEA AND 50 CONTROLS

Type of Organisms	Number of Patients		
	Winter	Summer	Controls
<i>Shigella flexneri</i>	5	7*	—
<i>Shigella sonnei</i>	1	7†	—
<i>Salmonella</i>	—	9	—
<i>Proteus</i>	7	35	6 (12%)
Coliform organisms	16	22	24 (48%)
Others	10	8	2 (4%)
No growth	61	12	18 (36%)
	100	100	50 (100%)

* 2 of these cases had *Salmonella* organisms in their stools.

† 1 of these cases had *Salmonella* organisms in his stools.

of the control group. A growth of *B. proteus* was obtained from 6 members of the winter series, from 26 members of the summer series and from 6 members (12%) of the control group.

It is noteworthy that the aforementioned selective media caused complete inhibition of growth of the bacteria obtained by swabbing in 61 cases during winter,

in 12 cases during summer and in 18 cases (36%) in the control series.

Discussion

In a previous communication from this hospital³ it was stated that stool cultures from 20 cases with severe diarrhoea had not yielded any pathogenic bacteria. However, the investigation was designed primarily to detect specific strains of *B. coli* and was not suited to the recovery of dysentery bacilli.

In the present survey no attempt was made to identify any potentially pathogenic strains of *B. coli* and the media employed favoured the growth of *Shigella* and *Salmonella* organisms. The former were found in 6% of children with diarrhoea in winter and 14% in summer. Previous work carried out at this hospital indicates that the number of swabs positive for *Shigella* organisms might have been 10-20% higher, if specimens had been submitted repeatedly from each patient during the course of his illness. However, it appears certain that dysentery was present in not more than 20% of the children.

Shigella flexneri was the commonest cause of dysentery in our patients. This differs from present-day experience in Great Britain⁴ and the State of New York² where *Shigella sonnei* is more prevalent.

Some light has been thrown on the causation of those cases of 'gastro-enteritis' at this hospital which cannot be attributed to infection with dysentery bacilli. *Salmonella* organisms were discovered in 12 patients of the summer series. (In our experience at this hospital,

extending over several years, infection with *Shigella* is 2-3 times as common as infection with *Salmonella* organisms.) *Proteus* was grown frequently from patients during the summer period. There is evidence that some strains of *Proteus* can cause diarrhoea in man,⁵ and it is possible that during the summer they are an important cause of diarrhoea in this area.

Most subjects in the winter series were suffering from upper-respiratory-tract infection, and the diarrhoeal attacks in these patients could probably be classed as 'parenteral' in origin. It is noteworthy that no growth was obtained on the selective media in 61% of the winter series.

It was only occasionally possible to distinguish on clinical grounds between patients suffering from dysentery and those with 'non-specific gastro-enteritis'. This did not surprise us, because the clinical picture of diarrhoea in children is governed, apart from the infecting agent, by such factors as the infecting dose, the age of the patient, his state of nutrition and, under certain circumstances, atmospheric temperatures. This aspect of the diarrhoea problem will be dealt with in a future communication.

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TUBEROUS SCLEROSIS IN A BANTU FEMALE

J. S. DU T. DE WET, M.B., CH.B.

Assistant Physician Superintendent, Tower Hospital, Fort Beaufort.

Whereas it is well known that races may vary in their proneness to certain diseases, such differences are probably being increasingly recognized as due to environmental factors. Where apparent differences between races exist in the incidence of some conditions, it may be found that these discrepancies are due to inadequate investigation, and to this group may belong the disease termed epiloia.

The condition known as tuberous sclerosis or epiloia does not thus far seem to have been reported in the Bantu races of Africa. Bourneville, in 1880, first established tuberous sclerosis as a morbid entity. Brain¹, in 1940, categorically stated that it occurred in White people only, but subsequently he amended this view and said that 'it is almost confined to the White races', chiefly the poorer classes.² Kinnier Wilson³ also held the view that tuberous sclerosis seemed to leave the Coloured races alone. Penrose,⁴ who suggested that the familial incidence pointed to some genetic mechanism and that it might be due to the coincidence of two or more dominant genes, made no mention of its occurrence in different races. Mayer-Gross, Slater and Roth⁵

expressed the view that it appeared to be due to a simple dominant gene, and they quoted Gunther and Penrose (1935) as having estimated that a quarter to half of all cases were due to fresh mutation; they did not refer to racial incidence.

The slow recognition of this disease in the South African Coloured races is no doubt due to the fact that there is as yet no special institution for non-European mental defectives in the country, and hence the condition rarely comes under the observation of those at all familiar with it. During 1948 an unmistakable case of epiloia was recognized on its admission to the Tower Hospital, Fort Beaufort, by Dr. L. van Dam, but not reported by her. This patient is still in hospital, and the case, in view of the alleged rarity of epiloia in non-European races, is thought to be of interest.

The patient was born on a farm near Grahamstown in 1932. She is not known to have had any European ancestors and her appearance is typically negroid. She has the somewhat lighter-shade brown skin commonly seen in South African Natives. Her family history, obtained recently from the owner of the farm

where she grew up, was to the effect that 'her own sister has a sprinkling of warts all over her face; her mother and one of her mother's sisters each had a big bunch of what looked somewhat like warts on the sides of the nose'.

In 1948 at the age of 17 years she was admitted to mental hospital because her father had reported that she suffered from convulsions which were increasing in frequency; according to him the fits had started several years previously and at first occurred about once per month, but had increased to 2 or 3 per day.

When admitted to hospital she was found to be in good physical health but had typical adenoma sebaceum overlying the butterfly area of the face. Her blood Wassermann was positive but the cerebrospinal fluid showed no abnormality. At that time the expression of her face was described as vacant and her replies to questions were slow, but with patience she could be persuaded to reply relevantly to simple questions and could count up to 10 on her fingers. However, she was unable to name many simple objects. In general conduct she was asocial and at times restless and impulsive, but she was not incontinent and could feed and dress herself.

During her 1st year in hospital she had 12 major epileptic fits and during her 2nd year 41. Subsequently the number of fits decreased and during her 5th year she had only 3. During the 6th year no fits were reported.

At present she has characteristic adenoma sebaceum covering the face, but careful examination fails to discover retinal phakomata or tumours elsewhere in the body.

Her intelligence seems to be that of an imbecile (accurate testing on the Binet-Simon Scale is not possible as she is a Native). She now behaves well and does some mechanical tasks in the ward. There is nothing to suggest that she has deteriorated intellectually or in personality.

The radiologist's report on X-ray of the skull was: 'There is fine conglomerate stippling with a more sclerotic focus and other less marked foci of increased density in the area of the parietal lobes; these are consistent with a process such as tuberous sclerosis.'

I have to thank the Commissioner for Mental Hygiene, Dr. I. R. Vermooten, for permission to publish this case report.

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QUESTIONS ANSWERED

PAIN IN MULTIPLE MYELOMATOSIS

Q. I have a patient with multiple myelomatosis, and I seek advice as to palliative treatment for the pain, etc. Morphine products cause nausea. She is at present on daily hydrocortisone, potassium chloride, a long-acting androgen (T.P.P.) weekly and a long-acting ACTH preparation (Corticotropin Z) weekly. Largactil does not do much good. She is also wearing a spinal brace.

A. This is a difficult condition to treat and few of the remedies available are of any value. The best way to alleviate pain in any of these malignant states is to make a direct attack on the condition itself. In multiple myelomatosis if there is a local area of pain then local measures may be effective, e.g. local irradiation or nerve block. In most cases the pain is widespread and for this the best results are obtained by the use of urethane. It is usual to start with 1-2 g. per day and increase gradually to a daily dose of 4-6 g. The drug causes nausea, which can sometimes be avoided by the use of enteric coated tablets. Cortisone, ACTH, nitrogen mustard

and ³²P have all proved disappointing. It has recently been claimed (*Blood*, 1955, 10, 252) that a rather striking symptomatic improvement has been obtained with a combination of urethane (0.5 g.) and an oral nitrogen-mustard compound (R 151 or β naphthyl-dichloropropylamine, 25 mg.)—the two drugs together in a gelatin capsule—daily dose 2-4 capsules. This combination of drugs was obtained from Messrs. Boots Pure Drug Co. Ltd., Nottingham, England. It proved to be non-irritating to the gastric mucosa.

Stilbamidine has been largely abandoned because of its toxic effects but it has been claimed that hydroxystilbamidine isethionate (May and Baker)—250 mg. dissolved in 10 ml. given slowly intravenously—is less toxic and as efficacious. It might be tried after the other drugs have failed or lost their effectiveness.

Finally, pain-relieving drugs—codeine, pethidine, physeptone, morphine, omnopon—can all be tried (with chlorpromazine should vomiting prove to be troublesome).

At the best the treatment is palliative.

ABSTRACT : UITTREKSEL

Topical Cortisone in Syphilitic Interstitial Keratitis. Review of Twenty-three Cases (29 Eyes). G. O. Horne. Brit. J. Vener. Dis., 31, 9. March 1955.

This long article summarizes the literature on the subject and reviews the author's cases. He concludes that topical cortisone is imperative in the treatment of syphilitic interstitial keratitis. The treatment should be started as soon as possible, preferably in hospital. Hydrocortisone (Compound F) is the best preparation—one drop of cortisone suspension hourly or 2 hourly round the clock in severe cases. The topical treatment is preferable to

subconjunctival injections. Topical cortisone appears to be equally effective whether or not antisiphilitic therapy is given at the same time, although it is recommended that antisiphilitic therapy should be given.

In early cases of keratitis inflammation is rapidly suppressed. In later cases indolent infiltration of the cornea and kerotic precipitates may not be cleared by cortisone. Treatment should be carried on for several weeks and careful watch made for relapses, preferably by slit-lamp examination. When these occur topical application is renewed.

F.W.F.P.

THE MEDICAL ASSOCIATION OF SOUTH AFRICA

BALANCE SHEET, 31st DECEMBER, 1954

1953		£	s.	d.	1953		£	s.	d.
27,203	Accumulated Funds			32,408	19	8			
27,296	Balance, 31st December, 1953 ..	27,203	11	0					
	Add: Surplus of Income over Ex-								
93	pended for the Year ended 31st	5,205	8	8					
(Deficit)	December, 1954								
272	National Health Services Emergency								
	Fund—Capital Account		257	2	6				
272	Balance—31st December, 1953 ..	272	4	6					
	Less: Delegates Expenses	15	2	0					
180	Dr. H. A. Moffat Memorial Fund—								
	Capital Account		242	15	6				
	Balance—31st December, 1953 ..	179	11	0					
180	Contributions Received during the	63	4	6					
	Year								
6,685	Liabilities								
	Sundry Creditors		4,106	8	6				
£34,340		£37,015	6	2	£34,340		£37,015	6	2

INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31st DECEMBER, 1954

1953		£	s.	d.	1953		£	s.	d.
20,575	To Printing of Medical Journal ..		18,397	12	0	27,345	By Income from Medical Journal ..		32,751
1,097	" Printing of Clinical Science ..		943	8	8				16
20,100	" Administration and Publication Ex-		21,905	11	10	25,690	Advertising, less Commission ..	31,205	13
	penses				1,511	Non-Members' Subscriptions ..	1,451	16	4
15,518	Salaries, Pension Fund, Unemploy-	17,108	2	3	144	Miscellaneous	94	6	10
1,186	ment Insurance and Pension	1,034	9	6					
837	Postages and Telegrams	977	5	10	959	" Income from Clinical Science ..		823	2
750	Sundry Expenses	1,000	0	0	522	Subscriptions and Sales	470	5	11
559	Rent 'Medical House'	336	5	0	437	Advertising, less Commission ..	352	16	3
	Wrappers				10,047	" Members' Subscriptions		10,478	12
445	Printing, Stationery and Office	622	13	4	2,733	" Agency Income		2,897	19
	Requisites				3,342	" General Income		4,497	18
333	Depreciation of Office Furniture,	338	12	7	2,515	Insurance Commission	3,501	8	6
272	Fixtures and Machines	288	3	4	606	Interest on Investments	611	10	10
200	Telephones	200	0	0	221	Miscellaneous	384	19	0
2,247	Audit Fees								
	To General Expenses		4,497	8	2				
1,781	Travelling Expenses		2,959	2	10				
380	Delegates	2,072	0	5					
	Staff	887	2	5					
165	Fees and Expenses—History of	501	7	2					
(Net In-	Medicine in South Africa	404	1	9					
come)	Expenses 'Byrness', less Rent ..								
100	Booklets and Questionnaires ..	377	18	11					
6	Entertainment Expenses	200	0	0					
45	Bad Debts	40	7	0					
	Medals	14	10	6					
100	Contribution—First World Confer-								
	ence on Medical Education								
500	To Grants to Universities for Library		500	0	0				
	Services								
	Cape Town	250	0	0					
	Witwatersrand	250	0	0					
93	To Surplus of Income over Expenditure		5,205	8	8				
(Deficit)	transferred to Accumulated Funds								
	Account								
£44,426		£51,449	9	4	£44,426		£51,449	9	4

BENEVOLENT FUND

BALANCE SHEET, 31st DECEMBER, 1954

1953	£	s.	d.	1953	£	s.	d.
38,003	Accumulated Funds			40,663	17	8	
1953	£	s.	d.	1953	£	s.	d.
38,003	Accumulated Funds			40,663	17	8	
				Assets			
				<i>Investments at Cost</i>			
				<i>Union Government Stocks (Quoted)</i>			
				(Market Value, 31st December, 1954—£6 767)			
				£2,500 31% 1962/65	2,450	0	0
				£1,500 31% 1952/57	1,492	10	0
				£1,125 3% 1957/64	1,125	0	0
				£1,000 3% 1959/69	1,000	0	0
				£1,000 3% 1960/70	1,000	0	0
				<i>Shares in Building Societies (Unquoted)</i>			
				Saambou (Permanente) Bouwenvereniging—14,700 Fully Paid-up Indefinite Shares of £1 each	14,700	0	0
				United Building Society—217 paid-up Permanent Shares of £50 each	10,850	0	0
				South African Permanent Mutual Building and Investment Society—60 Paid-up Permanent Shares of £50 each	3,000	0	0
				<i>Secured Loan</i>			
				Medical House (Proprietary) Limited—First Mortgage on Medical House, Wale Street, Cape Town	3,500	0	0
				<i>Sundry Debtors</i>			
				Medical House (Proprietary) Limited—Interest on Loan	175	0	0
				Interest Accrued	421	5	9
				<i>Cash on Bank Current Account</i>			
					950	1	11
£38,003				£40,663	17	8	

INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31st DECEMBER, 1954

1953	£	s.	d.	1953	£	s.	d.
2,237	To Benevolent Payments			1,605	By Interest on Investments		
17	„ Stationery and General Expenses			649	„ Appropriation from Capital for Additional Benevolence		
£2,254				£2,254			

ACCUMULATED FUNDS

1953	£	s.	d.	1953	£	s.	d.
35,643	By Balance, 31st December, 1953			38,002	17	4	
3,009	„ Contributions to Capital for the Year ended 31st December, 1954			3,281	9	5	
1,963	Donations			2,836	9	11	
827	Services Rendered			246	7	6	
219	Votive Cards			198	12	0	
£38,652				£41,284	6	9	

REPORT OF THE AUDITORS TO THE MEMBERS OF THE MEDICAL ASSOCIATION OF SOUTH AFRICA

We have examined the books and accounts and vouchers of the Association, and have satisfied ourselves of the existence of the securities. We have obtained all the information and explanations which, to the best of our knowledge and belief were necessary for the purpose of our audit. In our opinion, proper books of account have been kept by the Association, so far as appears from our examination of those books.

The attached Balance Sheet, signed by us for the purpose of identification, and Income and Expenditure Account are in agreement with the books of account. In our opinion and to the best of our information and according to the explanations given to us, the said Accounts give the information required by the Companies Act 1926, as amended, in the manner so required, and the Balance Sheet gives a true and fair view of the state of the Association's affairs as at 31st December, 1954, and the Income and Expenditure Account gives a true and fair view of the surplus for the year ended on that date.

BENEVOLENT FUND

We have examined the books and accounts and vouchers of the Benevolent Fund and satisfied ourselves of the existence of the Securities. The above Balance Sheet and Attached Statements of Income and Expenditure and Accumulated Funds are in agreement with the books of account. In our opinion the Balance Sheet gives a true and fair view of the state of the Fund's affairs as at 31st December, 1954, and the Statements of Income and Expenditure and Accumulated Funds give a true and fair view of the Income and Expenditure of the Fund in respect of the year ended that date.

Cape Town
8th March, 1955

Gurney, Notcutt & Fisher
Chartered Accountants (S.A.)
Auditors

MEDICO-LEGAL

VAN ASWEGEN v. ADMINISTRATOR, ORANGE FREE STATE, 1955 (3) S.A.L.R. 60 (0)

A. PALLEY, B.A., LL.B., M.B., Ch.B., D.C.H.

Cape Town

This case is of interest to medical practitioners in that it deals with the procedure which the Administrator of the Orange Free State must follow when dealing with an application made by a doctor to treat private patients in a provincial hospital.

The facts of the case are as follows: A medical practitioner duly qualified and registered made written application in June 1952 for permission to treat his private patients in the National Hospital, Bloemfontein. He did not receive a written reply but the Medical Director agreed verbally.

In December 1954 a written reply was sent to the medical practitioner intimating that the Executive Committee was unable to grant his request to treat private patients in the hospital. The Administrator claimed that the application was rejected after proper consideration and deliberation. No reason was given to the doctor why his application was refused.

In answer, applicant maintained that no valid decision could be made unless the party concerned had been given some opportunity to be heard and to refute any statement or allegation made in respect of his application. Short of this, applicant held that the Administrator's action was illegal and his decision invalid.

Where tribunals (or individuals) have to make decisions at their discretion, in our law the *audi alteram partem* rule applies. This means that affected or interested parties have the right to state their case, make representations and statements, answer allegations, and generally place all relevant facts before the tribunal invested with the power to reach decisions. When such opportunity has not been given, the tribunal cannot come to a legally valid decision.

In the circumstances of this case, the Court found that, according to the ordinance governing the National Hospital, the committee concerned was a body that could make decisions at its discretion. The *audi alteram partem* would, therefore, be applicable to this case.

The doctor was not given an opportunity of presenting his case to the advisory committee or the Administrator at all. The action of the Administrator-in-Executive-Committee was irregular in coming to a decision without hearing the applicant, and the decision was accordingly invalid. The Court set the order of the Administrator in Executive Council aside and remitted the matter so that a fresh decision would be taken, after the medical practitioner had been given an opportunity of stating his case.

NEW PREPARATIONS AND APPLIANCES : NUWE PREPARATE EN TOESTELLE

Chas. Pfizer & Co. (Inc.) issue the following:

Tyzine Nasal Solution. Tyzine (Pfizer brand of Tetrahydrozoline HCl) is a new pressor amine supplied in a 0.1% solution buffered to pH 5.5. Tyzine is a potent vasoconstrictor and decongestant when applied topically to the nasal mucosa. The solution is odourless, tasteless and non-irritating. **Dosage:** 1-4 drops instilled into each nostril not oftener than every 3 hours. Tyzine has proved of low toxicity when used locally in the suggested dose. Overdosing must be avoided, as with all decongestant agents. Available in 15 c.c. dropper bottles.

Terramycin and Tetracycln SF. These products are combinations of Terramycin (oxytetracycline) and Tetracycln (tetracycline) with B-complex vitamins, vitamin C and vitamin K. Each capsule contains 250 mg. of the antibiotic together with those quantities of the above vitamins needed in conditions of stress. Terramycin SF and Tetracycln SF therefore afford the convenience of employing a single preparation to provide both anti-infective and nutri-

tional therapy. **Dosage:** As with the antibiotics, adult dosage is based on 1 g. per day for moderate infections. Severe cases may require up to 2 g. per day. Both products are packed in vials of 16 capsules.

Enterobiotic Tablets. This product provides a combination of two antibiotics whose activities are complementary against the usual intestinal flora. Each tablet contains 50 mg. of Terramycin hydrochloride and 250 mg. of Neomycin sulphate. Terramycin is absorbed to a considerable extent from the gastro-intestinal tract after oral administration. Neomycin is poorly absorbed (about 3% of the amount ingested is excreted in the urine). Enterobiotic tablets are useful in suppressing the bacteria of the colon in surgery of the large bowel and the anus. The dosage varies at the discretion of the surgeon but administration should not extend beyond 72 hours. As neither Terramycin nor Neomycin is active against fungi, outgrowth of yeasts may follow reduction of the bacterial flora of the colon.

Available in bottles of 40 tablets.

POLIOMYELITIS IN THE UNION

Following are the returns, supplied by the Union Department of Health of cases notified under the Public Health Act as suffering from Poliomyelitis in the weekly periods from 11 June to 14 July 1955.

Period 11 June to 16 June

Period 17 June to 26 June

Transvaal:

Johannesburg Municipality: European 1, non-European 1. Pietersburg District: non-European 1. Total 3.

Cape Province:

East London Municipality: European 1. Cape Town Municipality (Goodwood): non-European 1. Total 2.

Natal:

Durban Municipality (Wentworth): European 1. Ladysmith Municipality: non-European 1. Total 2.

Total for the Union: European 3, non-European 4.

Transvaal:

Pretoria Municipality: European 2, non-European 1. Johannesburg Municipality: European 1. Piet Retief District: non-European 1. Total 5.

Cape Province:

Simonstown Municipality: non-European 1. Total 1.

Natal:

Durban Municipality: European 2. Total 2.

Total for the Union: European 5, non-European 3.

Period 24 June to 30 June

Cape Province:

East London Municipality: European 1. Total 1.

Total for the Union: European 1.

Period 1 July to 6 July

Transvaal:

Johannesburg Municipality: European 2. Total 2.

Cape Province:

East London Municipality: European 1. Vredendal V.M. Board: European 1. Total 2.

Natal:

Pietermaritzburg Municipality: European 1. Total 1.

Total for the Union: European 5, non-European 0.

Period 7 July to 14 July

Transvaal:

Johannesburg Municipality: European 1. Germiston Municipality: non-European 1. Total 2.

Cape Province:

Cape Town Municipality: European 1. Molteno Divisional Council: European 1. St. Mark's District: non-European 1. Total 3.

Natal:

Durban Municipality: non-European 1. Pietermaritzburg Municipality: European 1. Total 2.

Total for the Union: European 4, non-European 3.

TOTAL FOR THE UNION, 11 June to 14 July: Europeans 18, non-Europeans 10.

Union Department of Health Bulletin. Report for the 8 days ended 14 July 1955.

Plague, Smallpox, Typhus Fever: Nil

Epidemic Diseases in Other Countries:

Plague: Nil.

Cholera in Calcutta (India); Chalna (Pakistan).

Smallpox in Kabul (Afghanistan); Moulmein, Rangoon (Burma); Phnom-Penh (Cambodia); Ahmedabad, Allahabad, Bombay, Calcutta, Cochin, Delhi, Kanpur, Lucknow, Nagpur, Tellicherry (India); Chittagong, Dacca, Lahore (Pakistan); Saigon-Cholon (Viet-Nam); Mogadiscio (Somalia); Tanga (Tanganyika).

Typhus Fever in Baghdad (Iraq); Alexandria, Cairo (Egypt).

THE R.M.O.

Monday dawns; the air is crisp; the Doctor wakes,
shaves, baths and to the Railway Surgery makes.
A silent crowd awaits; They'll all soon have a go—
to hide their celebrations and trick the R.M.O.

The first man shuffles slowly in 'My back is sore,
I tried to go to work—the pain is getting more'.
And then the type who claims his stomach is upset,
Does not drink—just had a beer with one he met.

My nose is blocked, my nerves are weak, I ache in the spine,
Please don't think I'd be here if I were feeling fine.
Doc, I'm feeling worried. My wife she's overdue,
And not so long ago we had our little Sue.

Mummy says, 'Come see Johnny; he broke out all in bumps,
Maybe it's something he's eaten; maybe it's even mumps'.
Hello Doc! The Specialist says I'm not yet fit,
I just popped in for an interim certificate.

The last man's in and out. Time is moving on,
So many calls to do, must therefore soon be gone—
To tend the sicker ones in bed, and strive to seek
A livelihood and fortune at a ticky a head a week.

Nortonius

PASSING EVENTS : IN DIE VERBYGAAN

Dr. John K. McKechnie, B.Sc., M.B., B.Ch. (Rand), M.R.C.P. (Edin.), has been awarded a prize in the Clinical Research Essay Competition of the South-West Metropolitan Regional Hospital Board for 1954. The subject of his essay was *The Correlation of Radiological and Pathological Findings in Resection Specimens of Pulmonary Tuberculosis*. The research work was carried out while he was Medical Registrar at the King George V Hospital for Diseases of the Chest, Godalming, Surrey, England, during 1952 and 1953.

* * *

Research Forum of Groote Schuur Hospital, Faculty of Medicine, University of Cape Town. The next meeting of the Research Forum will be held in the large A-floor lecture theatre, Groote Schuur Hospital, Cape Town, on Wednesday, 3 August at 12 noon. Dr. Barry Lewis will speak on the *Estimation of Plasma Corticosteroids—A Technique and some Applications*.

* * *

Dr. J. N. de Villiers, of the Division of Obstetrics and Gynaecology, Groote Schuur Hospital, Cape Town, has been awarded the Nuffield Dominion Travelling Fellowship in Medicine for 1956. He will be associated with the Institute of Obstetrics and Gynaecology in London. Dr. de Villiers is leaving South Africa for England on 9 September.

* * *

Eat More Fish. The Minister of Health (whose portfolio includes the Department of Nutrition) has appointed a committee to investigate the possibilities of further increasing the available supplies of fish, and of increasing the demand for fish on the part of consumers. The committee consists of Mr. C. H. Spamer (Secretary for Nutrition—Chairman), Drs. C. von Bonde, G. M. Dreosti and J. M. Marchand, Messrs. R. J. Rumbelow, D. A. van

Gend, C. S. Milford, J. Stubbs and F. van Zyl, and Mr. J. R. R. Allerton (Secretary).

From the point of view of nutrition it is recognized to be of importance that greater quantities of fish should be eaten by the South African public. It is of first-class value as an article of food, and is cheaper than meat, which, moreover, has been subject to shortage from time to time in recent years. The Department of Nutrition have therefore issued a circular under the title *We should Eat more Fish*, which gives information on the nutritive value of fish, the choosing, cleaning and preparing, and cooking of fish, and recipes for a number of fish dishes. The circular can be obtained from the Department of Nutrition, Pretoria.

* * *

Cape Town Paediatric Sub-group. The next meeting of the above Sub-group will be held on Friday, 5 August 1955, in the E-Floor Lecture Theatre, Groote Schuur Hospital, Cape Town, at 8.15 p.m. The meeting will take the form of a Clinical Evening devoted to the subject of Neurology.

* * *

The South African Society of Industrial Health. There will be a meeting of medical practitioners who are interested in Industrial Medicine at 8 p.m. on Wednesday, 10 August 1955, at Medical House, 35 Wale Street, Cape Town. It is proposed to form a sub-group of the Industrial Medical Officers' Group of the Association (S.A. Society of Industrial Health). Dr. L. Blumberg, Chairman of the Red Cross Industrial Safety Committee, will address the meeting.

* * *

The British National Association for the Prevention of Tuberculosis (NAPT), Tavistock House North, Tavistock Square, London, W.C. 1, desires to encourage overseas postgraduate students in the United Kingdom, especially those studying tuberculosis, to

take part in September a large conference on the problem. It has to graduate stay in

British Edited F.R.C. (Canta) illustra Ltd.

Contents: Pregnant 5. Manage Breast Fe Pregnancy eases and Urinary S Heart Dis leosis and Gonorrh Duration Managem 18. Abnot Tract. 20 of the Fo Stage of 1 The Abn natal Mor 30. Force Capacity and Anal and Obst

The aim as carried kind in British has bec (physiol advance authori Sir Ear leading the cour trist, a rister. value to students specialis portanc based n other co The section Pregnan have be

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take part in its meetings. There are 3 meetings held in London in September, November and February, a provincial meeting in a large provincial centre, usually in April, and the annual conference in the summer, where overseas problems always figure on the programme and representatives of overseas countries attend. It has therefore recently been decided to admit overseas post-graduate students as associate members of NAPT during their stay in the United Kingdom at a subscription of 10s. 6d. per

annum. All meetings will be open to associate members and they will be at liberty to take part in discussions.

Dr. J. A. Cluver, M.B., Ch.B., D.A. (R.C.P. and S.) has commenced practice as an anaesthetist specialist at 413 Southern Life Buildings, St. George's Street, Cape Town. Telephones: Rooms 3-3202, Residence 6-4643.

BOOK REVIEWS : BOEKRESENSIES

BRITISH OBSTETRIC AND GYNAECOLOGICAL PRACTICE.

British Obstetric and Gynaecological Practice. Volume I. Obstetrics Edited by Sir Eardley Holland, M.D. (Lond.), F.R.C.P., F.R.C.S., F.R.C.O.G. and Aleck Bourne, M.A., M.B., B.Ch. (Cantab.), F.R.C.S., F.R.C.O.G. Pp. 1166 + xiv, with 391 illustrations. 115s. London: William Heinemann Medical Books Ltd. 1955.

Contents: 1. Physiology of Reproduction. 2. Physiology of Pregnancy. 3. The Pregnant Woman: Ante-Natal Care. 4. Physiology and Mechanism of Labour. 5. Management of Labour. 6. The Normal Puerperium. 7. The Breasts and Breast Feeding. 8. Management of the Newborn Infant. 9. The Toxaemias of Pregnancy. 10. Diseases and Abnormalities of Placenta and Membranes. 11. Diseases and abnormalities of the Genital Tract. 12. Abortion. 13. Diseases of the Urinary System in Obstetrics. 14. Diseases Associated with Pregnancy. 14A. Heart Disease in Pregnancy. 14B. The Anaemias of Pregnancy. 14C. Tuberculosis and Pregnancy. 14D. Diabetes Mellitus and Pregnancy. 14E. Syphilis and Gonorrhoea in Obstetric Practice. 14F. Tropical Diseases of Pregnancy. 15. Duration of Pregnancy. 16. Difficult Labour, its Incidence, Prevention and Management. 17. Dystocia due to or Associated with Abnormal Uterine Action. 18. Abnormal Presentations. 19. Dystocia due to Abnormalities of the Genital Tract. 20. Dystocia due to Faults in the Pelvis. 21. Dystocia due to Deformities of the Foetus. 22. Antepartum Haemorrhage. 23. Complications of the Third Stage of Labour. 24. Maternal Injuries. 25. Shock in Obstetric Practice. 26. The Abnormal Puerperium. 27. Stillbirth—its Causes and Prevention. 28. Neonatal Morbidity and Mortality. 29. Induction of Labour and Premature Labour. 30. Forceps. 31. Version. 32. Caesarean Section. 33. Operations to Enlarge the Capacity of the Pelvis. 34. Destructive Operations. 35. Obstetric Anaesthesia and Analgesia. 36. The Psychosomatic Approach to Childbirth. 37. Psychiatry and Obstetrics. 38. Medico-Legal. 39. Vital Statistics of Reproduction. Index.

The aim of this volume is to describe the practice of obstetrics as carried out in Britain today. This is the first undertaking of its kind in this branch of medicine. There are a large number of British text-books of obstetrics; but today the scope of this specialty has become so wide, and the researches in its ancillary sciences (physiology, bacteriology, haematology, biochemistry etc.) so advanced, that it is impossible for one author to produce an authoritative work that covers the whole subject. The editor, Sir Eardley Holland, therefore enlisted the aid of 29 of Britain's leading obstetricians drawn from practically every university in the country, supported by 2 physicians, 3 paediatricians, a psychiatrist, a neurologist, 2 anatomists, a medical statistician and a barometer. The result is an outstanding work which will be of immense value to all those who are interested in obstetrics—postgraduate students, hospital residents, general practitioners and obstetrician specialists. And the book will be of particular interest and importance in South Africa, the practice of obstetrics here being based more on the British methods than on the methods of any other country.

The whole realm of obstetrics has been covered, and each section has been written by an authority in the particular field. Pregnancy, labour, the puerperium, and the newborn infant, have been dealt with systematically, first the normal and then the

abnormal. In addition to the usual chapters covered in obstetric text-books, several interesting sections have been included, such as Vital Statistics of Reproduction and Medico-legal Aspects of Obstetrics; and special chapters have been given unusual and interesting headings, e.g. Operations to Enlarge the Capacity of the Birth Canal; The Incidence, Prevention and Management of Difficult Labour; Psychiatry and Obstetrics; the Psycho-somatic Approach to Childbearing.

In harmony with the authoritative nature of the authorship the standard of the work is of the highest, and very few inaccuracies occur. But since so much has to be covered in one volume, it is natural that some detail is omitted in many sections; and if the book is to be used as a reference work not all requirements will be fulfilled. Examples of this are many, such as the very short reference to congenital abnormalities of the genital tract and their influence on pregnancy and labour, the spondylolisthetic pelvis, and the causes of malformations of the foetus. A dogmatic attitude is seldom adopted in controversial subjects, and this is well illustrated in the discussion on the management of post-maturity. However not everyone will agree that vesico-vaginal fistulae should be repaired during pregnancy, nor that a successful repair should be followed by a vaginal delivery.

There is no doubt that the editor's aim has been very successfully achieved, and this work promises to become the leading postgraduate text-book in obstetrics produced in Britain.

F.B.

THERAPEUTIC ARTS ANCIENT AND LESS ANCIENT

Ancient Therapeutic Arts. By William Brockbank, M.A., M.D. (Camb.), F.R.C.P. Pp. 162, with illustrations. 25s. London: William Heinemann Medical Books Ltd. 1954.

Contents: The Ancient Arts of: 1. Enema Administration. 2. Cupping and Leeching. 3. Counter-Irritation. The Less Ancient Art of: 1. Intravenous Injection of Drugs.

This work is based on the 1950-51 Fitzpatrick lectures delivered to the Royal College of Physicians.

Although it deals only with four particular forms of therapeutic procedure, the author has delved into the history of each and presents his findings in an attractive and illuminating manner. It contains numerous illustrations which add to the informative and entertainment value of the book, and although the references are necessarily numerous the author presents a new and useful method of tabulation.

In many ways it is a delightful book which should appeal to doctor, student or layman.

A.H.T.

BOOKS RECEIVED—BOEKE ONTVANG

The Year Book of Endocrinology (1954-55 Year Book Series). Edited by S. Gordan, M.D., Ph.D. Pp. 392, with 94 illustrations. \$6-00. Chicago: Year Book Publishers, Inc. 1955.

Hypnotic Suggestion. Its Role in Psychoneurotic and Psychosomatic Disorders. A Thesis by S. J. van Pelt, M.B., B.S. Pp. 95. 8s. 6d. Bristol: John Wright & Sons Ltd. 1955.

A Psychosomatic Medicine Monograph. Maternal Emotions, A Study of Women's Feelings Towards Menstruation, Pregnancy, Childbirth, Breast Feeding, Infant Care and Other Aspects of Their Femininity. By Niles Newton, Ph.D. Pp. 140 + xi. 83-00. New York: Paul B. Hoeber, Inc. 1955.

World Population and World Food Supplies. By Sir E. John Russell, D.Sc., F.R.S. Pp. 513, with 45 illustrations. 50s. London: George Allen & Unwin Ltd. 1954.

The Year Book of Pathology and Clinical Pathology (1954-1955 Year Book Series). Edited by William B. Wartman, B.S., M.D. Pp. 486, with 168 illustrations. \$6-00. Chicago: Year Book Publishers, Inc. 1955.

The Abraham Flexner Lectures Series Number Twelve. Psychoanalysis Practical and Research Aspects. By Willi Hoffer, M.D. (Vienna), Ph.D. (Vienna), L.R.C.P., L.R.C.S. (Edinburgh),

L.R.F.P.S. (Glasgow). Pp. 102. 27s. 6d. London: Baillière, Tindall and Cox Ltd. 1955.

Backache in Women. By E. Schleyer-Saunders, M.D., F.I.C.S. Pp. 80, with 6 illustrations. 7s. 6d. Bristol: John Wright & Sons Ltd. 1955.

The Genesis and Prevention of Cancer. By W. Sampson Handley, M.S. Lond., F.R.C.S. Second edition. Pp. 320 + xix, with 114 illustrations. 21s. London: John Murray. 1955.

An Introduction to Psychiatry. By Max Valentine, M.D., D.P.M. Pp. 47 + viii, with illustrations. 15s. Edinburgh & London: E. & S. Livingstone Ltd. 1955.

Neuro-Vascular Hila of Limb Muscles. By James Couper Brash, M.C., M.A., M.D., D.Sc., LL.D., F.R.C.S.Ed., F.R.S.E. Pp. 100 + xvi, with 30 plates. 15s. Edinburgh & London: E. & S. Livingstone Ltd. 1955.

The Natural History of Tsetse Flies. An Account of the Biology of the Genus Glossina (Diptera). By Patrick A. Buxton, C.M.G., F.R.S. Pp. 816 + xviii, with 47 plates and 165 figures. £4 4s. 0d. London: H. K. Lewis & Co. Ltd. 1955.

Ciba Foundation Colloquia on Ageing: Volume I General Aspects. Edited by G. E. W. Wolstenholme, O.B.E., M.A., M.B., B.Ch. and Margaret P. Cameron, M.A., A.B.L.S. Pp. 255 + xii, with 38 illustrations. 30s. London: J. & A. Churchill Ltd. 1955.

Recent Advances in Radiology. By Thomas Lodge, M.B., Ch.B. (Sheff.), F.F.R., D.M.R. Third edition. Pp. 358 + x, with 182 illustrations. 45s. London: J. & A. Churchill Ltd. 1955.

Man's Mastery of Malaria. By Paul F. Russell, M.D., M.P.H. Pp. 308 + xiv, with 20 illustrations. 25s. London: Geoffrey Cumberlege Oxford University Press. 1955.

Mysterious Waters to Guard (Essays and Addresses on Anaesthesia). By Wesley Bourne. Pp. 398 + xvi. 42s. Oxford: Blackwell Scientific Publications. 1955.

Dextran—Its Properties and Use in Medicine. By John R. Squire, M.D., F.R.C.P. and J. P. Bull, M.D. et al. Pp. 91. 15s. Oxford: Blackwell Scientific Publications. 1955.

A Psychosomatic Approach to Medicine. By Desmond O'Neill, M.D., M.R.C.P. (Lond.), D.P.M. (Eng.). Pp. 197 + vii. 25s. London: Pitman Medical Publishing Co. Ltd. 1955.

CORRESPONDENCE : BRIEWERUBRIEK

VAGINAL HYSTERECTOMY

To the Editor: In the 2 July issue of the *Journal* there appeared an interesting and well-documented account of the uses of, and contra-indications to vaginal hysterectomy.

Opinion regarding this operation has undergone many changes but one feels that, especially when done in combination with a prolapse repair, it has a definite and well-earned place as a gynaecological operative procedure.

Two points in the article are, however, worthy of mention:

While one agrees with Dr. Pretorius in preferring a surgical to a radiological menopause in cases of dysfunctional bleeding, especially in the younger age-group, one of the reasons adduced has in my opinion been given an exaggerated importance. Dr. Pretorius states that, should the X-ray or radium sterilization prove ineffective, as it may possibly do, the patient is very likely to have an abnormal child in a subsequent pregnancy. While there may be an element of truth in this statement (it would be very difficult to disprove it) there is adequate evidence of X-ray treatment and investigation being done in many cases without such dire consequences. In case of need one does not hesitate to use X-ray investigation during pregnancy, and in my experience the incidence of abnormality is no greater than would occur in an unselected group. Kaplan,² who has treated cases of infertility by the therapeutic application of X-rays to the ovaries and pituitary with considerable success, has followed some of his patients for many years, and has recently reported on the grandchildren of those patients irradiated. The incidence of foetal abnormality was no higher than would be the case in patients who were not so treated. This, admittedly, is not a big point, but is felt worthy of note.

The second point is rather more serious. Dr. Pretorius uses a dilute adrenaline solution for haemostasis and he declares this method of haemostasis to be absolutely safe in his experience.

It is with regret that I have to state that this was not the experience of the gynaecological unit at Manchester in which I was registrar. The subject of haemostasis in vaginal plastic work was given a very extensive trial by the unit and numerous solutions were tried:

1. Saline alone, to see if pressure caused the haemostasis. This proved quite useless.

2. Local anaesthetic solutions. The idea here was that one could use less general anaesthesia, and the local anaesthetic, having a vasodilatory effect, would counter some of the vasoconstrictor action of the adrenaline. Fairly good haemostasis was obtained.

3. Dilute adrenaline solution was used but this was soon abandoned because, though the haemostasis was good, it was in fact too good. Operations were virtually bloodless, but on one occasion following a vaginal hysterectomy, severe reactionary haemorrhage took place, necessitating another anaesthetic. I was fortunately able to place 3 mattress sutures in the vaginal

vault to stop the bleeding. On another occasion the haemorrhage was so severe that the blood burst the suture line and went into the peritoneum cavity. Only a laparotomy and 6 or 7 pints of blood saved this patient's life. The adrenaline solution effects an excellent haemostasis, but unless absolutely no oozing points, however small, are left, one runs the risk of the oozing point becoming a large welling capillary bed when the effect of the adrenaline has worn off. After these two episodes we abandoned the adrenaline method.

4. Pituitrin, 10 units in 20 c.c. of saline, was used and injected into the base of the broad ligament. Once again fairly good haemostasis was obtained but, with this method and methods 2 and 3, on several occasions the patients became badly shocked in a curious and inexplicable manner. After spending at least 6 afternoons, 4 hours at a stretch, resuscitating these patients, and feeling very uncomfortable about them all the time, I have abandoned all haemostatic agents and prefer to use Spencer Wells forceps and ligatures. The operation is a little more difficult and may take longer, but in my opinion it is much safer than when these haemostatic agents are used.

Anyone who has had experience of one of these profoundly shocked cases will appreciate that the haemostatic technique is certainly not absolutely safe.

I trust that these remarks will be accepted as a constructive criticism and that our experience will act as a warning for those who propose to use some form of haemostasis.

Our trial series, extending over a period of 3 years, included several hundreds of vaginal plastic operations. There were happily no deaths, but many cases were too close for comfort.

David Barron

Colonial Mutual Buildings
106 Adderley Street
Cape Town
15 July 1955

1. Pretorius, H. M. (1955): *S. Afr. Med. J.*, **29**, 635.

2. Kaplan, I. I. (1953): *J. Obstet. Gynec. Brit. Emp.*, **60**, 872.

THE WATERING EYE

To the Editor: One cause of the Watering Eye which was not mentioned in Dr. Appleton's timely article¹ on this subject is a minute foreign body embedded in the cornea or under either lid. Small corneal ulcers which do not stain with fluorescein can also be overlooked.

V. J. Fielding

28 Baines Avenue
Salisbury, Southern Rhodesia
18 July 1955

1. Appleton, S. C. (1955): *S. Afr. Med. J.*, **29**, 567 (11 June).